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COLLECTION**

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Note on the European Pavement Ant, *Tetramorium caespitum*, in the Philadelphia area (Hymenoptera: Formicidae)

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The Philadelphia, Pennsylvania, area may have been one of the original sites of introduction of the common European pavement ant, *Tetramorium caespitum* L., into the United States. Sailing ships from Europe, since the days of William Penn in the 17th Century, may have brought this species with cargo. The Swedes, Dutch, and British could have brought colonies repeatedly to the mild shores of the Delaware River at Marcus Hook, Upland (now Chester), and later to Philadelphia. This may be the species referred to by Kalm in 1748 in Philadelphia (Donisthorpe, 1927). A more specific and more recent manner of carrying the ants is suggested by the repeated introduction of English ivy (*Hedera helix*) to the campus of Swarthmore College in the southwestern suburban area of Philadelphia. An historical account of the acquisition of the ivy covering the walls of the principal college building, Parrish Hall, has been recently given by Isabelle Bronk (1964). This account, originally published in 1908, states that the custom of setting out class ivies was inaugurated in 1889. Members of the college were accustomed to bring living slips of ivy from Europe, before the days of the U. S. Department of Agriculture Plant Quarantine Service. It would have been a simple matter for a fecundated female of this ant to have survived the journey in soil about the ivy roots. For example, Dean Bond brought some in 1903 from the ruins of Ludlow Castle, England, others brought living ivy from a Quaker meeting house at Swarthmore, England, from Addison's Walk at Magdalen College, Oxford, from Christ's College, Cambridge, from a ruined church in Scotland, and from the Royal Gardens of the Luxembourg, Paris.

This ant is well established on the Swarthmore College campus at the present time and is abundant under the walls and walks about Parrish Hall. It lives also in and about the Benjamin West House on the campus, the house where the celebrated painter was born in 1738. The house itself was built about 1724. The ants are here nocturnal during the winter months and scavenge over the ground floor for food, being warmed by basement heating pipes. In April and May workers appear regularly in large numbers on the pavement stones outside. They appear at the same time outside Parrish Hall and other buildings, emerging from under pavement stones. A room of the two-year-old Animal Wing of the biology building became infested with this species in October 1964.

These swarms engage in the well-known combats described by H. C. McCook (1878, 1879). His accounts and specific determinations leave no doubt that the habits of this ant have not changed in the approximate 100 years since he returned from participation in the Civil War to become a minister in Philadelphia. Ironically, the chief notoriety of these ants "is due to their martial instincts. Hundreds, even thousands of them are often seen waging battle with great ferocity and persistence. One battle, which was noted close by the wall, within the enclosure of a church on Broad Street and Penn Square, was prolonged for a period of two weeks and several days. . . ." The combats that he described as taking place in May, 1879, occur regularly on the Swarthmore campus in the same month. They may take place as early as late April and may extend into June. Föxel, quoted by Donisthorpe (*loc. cit.*), described an extended combat between thousands of ants that took place on the grounds of the University of Zurich, starting April 24, 1870, and lasting more than a month.

A modern study of this unusual and recurrent type of behavior would appear to be worthwhile, since no one has really explored the reasons for these conflicts. A possible hypothesis is that adjacent colonies increase in size until their territories meet or overlap. This expansion and increased seasonal activity results then in fighting.

LITERATURE CITED

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